60-08 Excite Advanced Adhesive Technology (Project 99-35) (01/00)

For **UPDATE**, click here.

Excite is a fifth-generation (i.e., "one-component"), light-activated dentin bonding agent marketed by Ivoclar Vivadent. It is recommended for direct bonding of resin composite, Ceromer™, and compomers to enamel and dentin. Ceromer™ is a trademark term to describe a type of resin composite restorative material made by Vivadent. Excite is also indicated for use as a dentin treatment prior to luting a ceramic or resin restoration with a light-activated resin cement. According to the manufacturer, Excite is distinguished from other "one-component" bonding agents in that it contains extremely small (i.e., 12-nanometer) filler particles. Because they are so small, the manufacturer claims that the filler particles can penetrate into the demineralized dentin and contribute to formation of the hybrid layer. Another purported advantage of their small size is



that they do not contribute significantly to the adhesive's film thickness. This is an important consideration when using a dentin bonding agent prior to cementing an indirect restoration. Other purported advantages of Excite are that it covers completely with only one coat, eliminates post-treatment sensitivity, and is acetone-free. Using an ethanol solvent supposedly makes Excite's application more technique tolerant because it is less volatile than acetone and is not as greatly affected by degree of dentin moisture. Although Excite is described as a "single-component" product, it is applied only after etching the enamel and dentin with phosphoric acid.

The first step in applying Excite is to etch the enamel for 15 seconds and the dentin for 10 seconds with Total Etch, a 37% phosphoric acid etchant. The etchant is removed with thorough rinsing and the tooth structure is lightly dried with air or blot dried. Excite Adhesive is generously applied to the tooth structure using a scrubbing motion for 10 seconds, gently air dried for 3 seconds, and light activated for 20 seconds. The restoration is then placed using standard

techniques.

Excite is available in bottle form and in innovative SoftTouch™ Unit Dose Vessels (Figure A) which are said to enhance infection control because they are intended for single use. The SoftTouch™ Unit Dose Vessels are supplied with plastic finger clips (Figure B) similar to the rings worn by prophylaxis technicians for holding prophy paste.

Manufacturer:

Ivoclar Vivadent 175 Pineview Drive Amherst, NY 14228 (800) 533-6825 (716) 691-0010 (716) 691-2285 FAX www.ivoclarvivadent.us.com

Suggested Retail Price:

\$99.00 Excite Advanced Adhesive Technology Single Dose Introductory Package (item number 6556609) contains:

- -one 2-g syringe of Total Etch (37% phosphoric acid etchant)
- -fifty 0.1-g SoftTouch™ Unit Dose Vessels
- -fifty plastic applicators
- -five finger clips

Government Price:

\$40.00 Excite Advanced Adhesive Technology Single Dose Introductory Package (item number and contents as listed above)

ADVANTAGES:

- + Produces strong bond to moist dentin (26.1 MPa).
- + Application process is simple and straightforward.
- + Extremely fast to apply.
- + Covers tooth structure in only one coat.
- + Available in single-dose containers that enhance infection control and make clean-up easy.
- + Can be used for direct and indirect bonding.
- + Instructions accurately describe product indications and use.
- + Is provided with excellent, graphics-only, laminated instruction card.
- + Expiration dates and lot numbers are stamped on individual components.
- + No offensive odor.
- + Recommended storage conditions are provided on box.
- + Is provided with a Material Safety Data Sheet (MSDS).

DISADVANTAGES:

- Not intended for all types of bonding (e.g., amalgam bonding, porcelain repairs).
- Some users thought the product was not as effective as other bonding agents in reducing/preventing thermal sensitivity.

SUMMARY AND CONCLUSIONS:

Excite is one of the few fifth-generation (ie, "one-component") bonding products that is clearly and accurately marketed as being for limited bonding purposes. To its credit, Ivoclar Vivadent does not claim that Excite can be used for such things as amalgam bonding and porcelain repairs because it does not come with additional components necessary for those uses. Excite is remarkably fast to apply, covers the tooth surface in only one application, and has a bond strength to dentin similar to that of the other nanofilled bonding agent currently on the market (Prime & Bond NT, Dentsply/Caulk). It clearly enhances infection control because of its innovative unit-dose packaging. The application process is very easy to understand because Excite is provided with one of the few graphics-only instruction cards. Clinicians who dislike the thicker viscosity of many currently-marketed bonding agents will appreciate Excite's thinner viscosity. For the simple bonding procedures for which it is intended, **Excite** is rated **Recommended** for use by the federal dental services.

UPDATE In January 2002, Ivoclar Vivadent modified Excite by adding an additional photoactivator (acylphosphine-oxide) so that it can now be cured by all types of plasma arc lights. Prior to the modification, some of these lights were not capable of polymerizing the product.